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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/298,372	04/23/1999	SING BING KANG	DEC99-34	1976

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EXAMINER

YENKE, BRIAN P

ART UNIT PAPER NUMBER

2614

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

✓

Office Action Summary

Application No.

09/298,372

Applicant(s)

KANG ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment (received 27 November 2001).
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 (claims 3, 8, 13 and 24 all being cancelled) is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-7, 9-12, 14-23 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: List of US References accompanying PTO1449 (#2).

1. 5,821,993, Oct. 13, 1998, Method and system for automatically **calibrating** a color camera in a machine vision system; David A. Robinson, **348/187**, 188; 382/167 [IMAGE AVAILABLE]
2. 5,467,128, Nov. 14, 1995, High speed imager test station; George J. Yates, et al., **348/187**, 188; 702/108 [IMAGE AVAILABLE]
3. 5,444,481, Aug. 22, 1995, Method of **calibrating** a CCD camera; Masatoshi Ohshima, et al., **348/187**, 94, 95; 134, 180; 356/141.4, 400 [IMAGE AVAILABLE]
4. 5,351,201, Sep. 27, 1994, Method and apparatus for automatic performance evaluation of electronic display devices; John H. Harshbarger, Jr., et al., **348/187**, 207; 702/182 [IMAGE AVAILABLE]
5. 5,181,098, Jan. 19, 1993, Procedure and device for the automatic correction of skew, of color superimposition, and of image uniformity for television cameras; Jean-Claude Guerin, et al., **348/187**, 263 [IMAGE AVAILABLE]
6. 5,136,388, Aug. 4, 1992, Method of evaluating a solid state image sensor using frequency distribution profile; Yoshikazu Sano, et al., **348/187**, 251 [IMAGE AVAILABLE]
7. 4,962,425, Oct. 9, 1990, Photometric device; Mark S. Rea, **348/187**, 615, 678, 687 [IMAGE AVAILABLE]
8. 4,544,952, Oct. 1, 1985, Correction control device and a system for automatic establishment of correction data for a television camera; Luc Pham van Cang, **348/188**, 223, 251, 263, 649; 358/518 [IMAGE AVAILABLE]
9. 4,435,727, Mar. 6, 1984, Apparatus and method for use in **calibrating** the time axis and intensity linearity of a streak camera; Norman H. Schiller, et al., **348/187**, 135; 968/854, DIG.1 [IMAGE AVAILABLE]

DETAILED ACTION

1. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

2. In reference to the applicant's remarks that no US references were provided on the PTO-1449. The examiner is providing a copy of the list of US references which was attached (separate sheet of paper) to the PTO-1449 (paper #2). This attached list comprised the US references the examiner included on the PTO-892 (marked with an X since provided by applicant), which was included in the previous Office Action (29 June 2001).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-7, 9-12, 14-23 and 25 rejected under 35 U.S.C. 102(b) as being anticipated by **Carmeli, US 5,699,440**.

In considering claims 1, 2, 4, 6-7, 9, 11-12, 14, 16-19 and 21-23,

Cameli, discloses a system which tests the performance of at least one electro-optical test devices, which include a light source, test target, lens and a imaging system. The electro-optical system includes a test generator 19, display 18, lens 13 and calibrated camera 12 (Fig 1a/b). A computer 17 which

processes the information from system 11 via digitizer 16 (Fig 1a/b), includes a memory (col 5, line 15-23) where a stored database is located, and also includes analysis unit.

1) the claimed digitizing an image of a blank textureless surface having a uniform illumination is met by digitizer 16 (Fig 1a/b) which digitizes a blank textureless surface as shown in Fig 10a (col 11, line 11-16)

2) the claimed computing intrinsic parameters of the camera based on pixel intensity drop off effects in the digitized image caused by a vignetting effect is met where based on the vignetting effects (Fig 10b), the computer 17 computes the performance/calibration of various functions (col 6, line 10-29) where the database of memory (computer 17) stores pre-calibrated data of the devices/components for proper alignment. The analysis unit (of computer 17) analyzes the digitized image to determine performance of the electro-optical component to be representative of the system and being equal to the product of component performances of each test device and of each pre-calibrated device.

a) Modular Transfer Function

b) Contrast Transfer Function

c) Grey Level Linearity

d) Illumination Uniformity

e) Geometrical Distortion

d) Signal to Noise Ratio

e) Transient Response

h) Blemishes

i) Blooming and

j) Chromaticity

In considering claim 5, 10, 15, 20 and 25,

The claimed computing parameters of a model by minimizing the difference between the digitized image and the model **is met by computer 17 in which the stored database in the memory which stores pre-calibrated components is analyzed by the analyzer (computer 17) after the image is digitized. The digitized image is produced under control of the software stored in computer 17 (col 6, line 48-50) which selects from the database the corresponding standard pre-calibrated components whose physical and optical data are known. Then once the image is formed/digitized, the analyzer is able to determine the resulting performance of a test device or the product of the performances and then displayed (Fig 2a-d).**

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-4700.

B.P.Y.

29 APRIL 2002


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600